

SAFETY DATA SHEET

Date Printed: 04/25/2024

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SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Tantalum Hydride

Product Code: TA-HID5-05

CAS Number: 13981-95-8

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
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+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE



Signal Word: Danger

Hazard Statements

H228

Flammable solid.

H261

In contact with water releases flammable gas.

H302+H312+H332

Harmful if swallowed, in contact with skin, or if inhaled.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary Phrases

P210

Keep away from heat/sparks/open flames/hot surfaces.— No smoking.

P223

Keep away from any possible contact with water, because of violent reaction and possible flash fire.

P231+P232

Handle under inert gas. Protect from moisture.

P240

Ground/bond container and receiving equipment.

P241

Use explosion-proof electrical/ventilating/lighting equipment.

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P302+P352

IF ON SKIN: Wash with plenty of soap and water.

P304+P340

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

HMIS CLASSIFICATION:

Health: 1

Fire: 3

Reactivity Hazard: 2

NFPA RATING:

Health: 1

Flammability: 3

Reactivity Hazard: 2

EYE CONTACT: Causes irritation and burns to the eyes.

SKIN CONTACT: Causes irritation and burns to the skin.

INHALATION: EXTREMELY HARMFUL! Causes irritation and burns to the nasal cavity and respiratory tract.

INGESTION: Harmful if swallowed.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: TaH5

Molecular Weight: 185.99

CHEMICAL NAME: Tantalum Hydride

CAS #: 13981-95-8

%wt: 100

SECTION 4. FIRST AID MEASURES

EYE EXPOSURE:

Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate medical attention.

SKIN EXPOSURE:

Wash affected area with soap and copious amounts of water. Remove contaminated clothing if necessary. Seek medical assistance immediately if irritation, redness persists, or if burns develop.

INHALATION:

Remove victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. Give oxygen if necessary. Give CPR if not breathing. Seek immediate medical care.

INGESTION:

Seek medical assistance immediately. Keep victim calm.

SECTION 5. FIREFIGHTING MEASURES**FLASH POINT:**

Pyrophoric

Autoignition:

Not available

EXPLOSION LIMITS:

Not available

EXTINGUISHING MEDIUM:

Class D extinguisher only. Or smother with dry sand. DO NOT USE WATER!

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. Contact with water released flammable gases.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:

Hydrogen gas and tantalum oxides

SECTION 6. ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS:**

Wear all appropriate equipment when using this material.

Ensure adequate ventilation.

Avoid the formation of dust. Avoid breathing vapors, mist, gas, or dust.

ENVIRONMENTAL PRECAUTIONS:

Prevent spillage from entering drains or allowing to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

Cover with dry lime, dry sand, or soda ash. Sweep up and place in suitable container for proper disposal.

SECTION 7. HANDLING AND STORAGE**PRECAUTIONS FOR SAFE HANDLING:**

Wear appropriate personal protective equipment.

Avoid contact with skin and eyes.

Use with adequate ventilation.

Avoid formation of dusts and aerosols.

Handle under inert gas. Keep ignition sources away.

Protect against electrostatic charges.

CONDITIONS FOR SAFE STORAGE:

Store in cool, dry, and well-ventilated area. Keep away from incompatible materials.

Store away from water. Store under argon. Moisture sensitive. Store between 15-30°C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS:

Contains no substances with occupational exposure limit values.

EYE PROTECTION:

Wear chemical safety glasses or goggles and face shield.

SKIN PROTECTION:

Wear nitrile or rubber gloves, and a complete suit protecting against chemicals.

VENTILATION:

Provide local exhaust, preferably mechanical.

RESPIRATOR:

Use an approved respirator.

ADDITIONAL PROTECTION:

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM:

Gray powder

ODOR:

None

MOLECULAR WEIGHT:

185.99

BOILING POINT:

No data available

MELTING POINT:

No data available

SPECIFIC GRAVITY:

15.1 gm/ml

SOLUBILITY:

Violent Reaction with water liberates flammable gases

SECTION 10. STABILITY AND REACTIVITY

STABILITY:

Stable

HAZARDOUS POLYMERIZATION:

Will not occur

CONDITIONS TO AVOID:

Heat, flames, sparks, and other ignition sources

INCOMPATIBILITY:

Strong oxidizing agents, alcohols, water, and acids

DECOMPOSITION PRODUCTS:

Hydrogen gas and tantalum oxides

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Not available

CARCINOGENIC EFFECTS:

No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

MUTAGENIC EFFECTS:

Not available

TETRATOGENIC EFFECTS:

Not available

CHRONIC TOXICITY:

Not available

RTECS:

No data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12. ECOLOGICAL INFORMATION

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations

SECTION 14. TRANSPORT INFORMATION

UN3132

Marine Pollutant: No

Water-Reactive solid, flammable, n.o.s.

(Tantalum hydride)

CLASS

4.3 (4.1)

PG II

SECTION 15. REGULATORY INFORMATION

SARA 302/304:

Not Listed

SARA 311/312:

Not Listed

SARA (TITLE 313):

Not Listed

CALIFORNIA PROP. 65:

Not Listed

WHMIS CANADA:

Not Listed

MASSACHUSETTS RIGHT TO KNOW COMPONENTS:

No components are subject to the Massachusetts Right to Know Act.

NEW JERSEY RIGHT TO KNOW COMPONENTS:

No components are subject to the New Jersey Right to Know Act.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS:

No components are subject to the Pennsylvania Right to Know Act.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.